

WHAT IS CLAIMED IS:

1. A channel assigning method in a mobile communication system, comprising the steps of:
 - 5 generating a channel assignment message including a start time for channel assignment, a duration of the channel assignment, and a sequence number for message identification; and
 - transmitting the channel assignment message to a mobile station on an existing traffic channel.
- 10 2. The channel assigning method of claim 1, further comprising the step of deleting a previous channel assignment message.
3. The channel assigning method of claim 2, wherein if a previous
 - 15 channel assignment message is deleted, the start time and sequence number of the channel assignment message are set according to a start time and a sequence number of the previous channel assignment message and the duration of the channel assignment message is set to 0.
- 20 4. The channel assignment method of claim 1, further comprising the step of updating a previous channel assignment message.
5. The channel assigning method of claim 4, wherein if a previous channel assignment message is updated, the start time, sequence number, and
 - 25 duration of the channel assignment message are set according to a start time, sequence number, and duration of the previous channel assignment message.
6. The channel assigning method of claim 3, wherein if the previous channel assignment message is deleted, the sequence number of the
 - 30 channel assignment message is set to be identical to the sequence number of the

previous channel assignment message.

7. The channel assigning method of claim 5, wherein if the previous channel assignment message is updated, the sequence number of the channel assignment message is set to be identical to the sequence number of the previous channel assignment message, or a transmission period between the start time and the end of the duration of the channel assignment message overlaps with a transmission period between the start time and the end of the duration of the previous channel assignment message for a predetermined time period.

10

8. The channel assigning method of claim 1, wherein the channel assignment message is a supplemental channel assignment message.

~~9.~~ A scheduling table making method comprising the steps of:

15 receiving a plurality of channel assignment messages successively from a base station on an existing traffic channel, each of the channel assignment messages having the fields of a start time, a duration, a sequence number for message identification, and a channel identifier for channel identification; and

storing the received channel assignment messages in a memory

20 according to the start times, durations, and sequence numbers of the channel assignment messages, so that data communication is conducted on channels assigned by the channel assignment messages.

10. The scheduling table making method of claim 9, further

25 comprising the step of deleting a channel assignment message from the memory if it is determined based on the start time, duration, and sequence number of the channel assignment message that the channel assignment message was stored in the memory and requests the stored channel assignment message to be deleted.

30 11. The scheduling table making method of claim 9, further

comprising the step of updating a channel assignment message in the memory if it is determined based on the start time, duration, and sequence number of the channel assignment message that the channel assignment message was stored in the memory and requests the stored channel assignment message to be updated.

5

12. The scheduling table making method of claim 10, wherein if a channel assignment message having a sequence number identical to the sequence number of a received channel assignment message is in the memory, it is determined that the received channel assignment message was stored in the
10 memory.

13. The scheduling table making method of claim 12, wherein if the duration of the received channel assignment message is 0, it is determined that the received channel assignment message requests the stored channel assignment
15 message to be deleted.

14. The scheduling table making method of claim 11, wherein if the memory has a channel assignment message having a sequence number identical to the sequence number of a received channel assignment message or if the
20 memory has a channel assignment message having a transmission period between a start time and the end of a duration that is overlapped with a transmission period between the start time and the end of the duration of a received channel assignment message, it is determined that the received channel assignment message was stored in the memory.

25

15. The scheduling table making method of claim 14, wherein if the duration of the received channel assignment message is not 0, it is determined that the received channel assignment message requests the stored channel assignment message to be updated.

30

16. The scheduling table making method of claim 10, wherein the channel assignment messages are supplemental channel assignment messages.

17. A channel assigning method for a mobile station in a CDMA mobile communication system, comprising the steps of:

receiving a plurality of channel assignment messages successively from a base station on an existing traffic channel, each of the channel assignment messages having the fields of a start time, a duration, a sequence number for message identification, and a channel identifier for channel identification;

storing the received channel assignment messages in a memory according to the durations and sequence numbers of the channel assignment messages; and

conducting data communication on a channel corresponding to the channel identifier of a first read channel assignment message for a period between the start time and the end of the duration set in the read channel assignment message and then on a channel corresponding to the channel identifier of a next read channel assignment message for a period between the start time and the end of the duration set in the next channel assignment message, the start time of the next channel assignment message being set to or after the end of the data communication according to the first read channel assignment message.

18. The channel assigning method of claim 17, further comprising the step of deleting a channel assignment message from the memory if it is determined based on the start time, duration, and sequence number of the channel assignment message that the channel assignment message was stored in the memory and requests the stored channel assignment message to be deleted.

19. The channel assigning method of claim 17, further comprising the step of updating a channel assignment message in the memory if it is

determined based on the start time, duration, and sequence number of the channel assignment message that the channel assignment message was stored in the memory and requests the stored channel assignment message to be updated.

5 20. The channel assigning method of claim 18, wherein if a channel assignment message having a sequence number identical to the sequence number of a received channel assignment message is in the memory, it is determined that the received channel assignment message was stored in the memory.

10 21. The channel assigning method of claim 20, wherein if the duration of the received channel assignment message is 0, it is determined that the received channel assignment message requests the stored channel assignment message to be deleted.

15 22. The channel assigning method of claim 19, wherein if the memory has a channel assignment message having a sequence number identical to the sequence number of a received channel assignment message or if the memory has a channel assignment message having a transmission period between a start time and the end of a duration that is overlapped with a
20 transmission period between the start time and the end of the duration of a received channel assignment message, it is determined that the received channel assignment message was stored in the memory.

23. The channel assigning method of claim 22, wherein if the
25 duration of the received channel assignment message is not 0, it is determined that the received channel assignment message requests the stored channel assignment message to be updated.

24. The channel assigning method of claim 17, wherein the data
30 communication step comprises the steps of:

reading a channel assignment message with the earliest start time and conducting data communication on a channel corresponding to the channel identifier of the read channel assignment message for a period between the start time and the end of the duration set in the read channel assignment message;

- 5 reading a channel assignment message with the start time second to the earliest and conducting data communication on the existing channel for a period between the start time and the end of the duration set in the second read channel assignment message if the channel identifiers of the first and second read channel assignment messages are identical;
- 10 releasing the existing channel at the end of the duration set in the first read channel assignment message if the channel identifiers of the first and second read channel assignment messages are different, and conducting data communication on a channel corresponding to the channel identifier of the second read channel assignment message for a period between the start time and
- 15 the end of the duration set in the second read channel assignment message.

- 25 25. The channel assigning method of claim 24, wherein if the channel identifiers of the first and second read channel assignment messages are identical and the time from the end of the data communication according to the first read channel assignment message and the start time until the start time of the
- 20 second read channel assignment message is a predetermined time or greater, the existing channel is released, the released channel is reestablished from the start time and the end of the duration of the second read channel assignment message, and conducting data communication on the reestablished channel.

25

26. The channel assigning method of claim 17, wherein the channel assignment messages are supplemental channel assignment messages.

27. A channel assigning apparatus for a mobile station in a CDMA
- 30 mobile communication system, comprising:

a receiver for receiving a plurality of channel assignment messages successively from a base station on an existing traffic channel, each of the channel assignment messages having the fields of a start time, a duration, a sequence number for message identification, and a channel identifier for channel
5 identification;

a memory having a scheduling table for storing the received channel assignment messages; and

a controller for storing the received channel assignment message in the scheduling table of the memory according to the durations and sequence numbers
10 of the channel assignment messages, sequentially reading the stored channel assignment messages, and assigning channels based on the channel identifiers of the read channel assignment messages, for data communication.

28. The channel assigning apparatus of claim 27, wherein the
15 controller deletes a channel assignment message in the scheduling table if the controller determines based on the start time, duration, and sequence number of the channel assignment message that the channel assignment message was stored in the scheduling table and requests the stored channel assignment message to be deleted.

20

29. The channel assigning apparatus of claim 27, wherein the controller updates a channel assignment message in the scheduling table if it is determined based on the start time, duration, and sequence number of the channel assignment message that the channel assignment message was stored in the
25 scheduling table and requests the stored channel assignment message to be updated.

30. The channel assigning apparatus of claim 28, wherein if a channel assignment message having a sequence number identical to the sequence
30 number of a received channel assignment message is in the scheduling table, the

controller determines that the received channel assignment message was stored in the scheduling table.

31. The channel assigning apparatus of claim 30, wherein if the
5 duration of the received channel assignment message is 0, the controller determines that the received channel assignment message requests the stored channel assignment message to be deleted.

32. The channel assigning apparatus of claim 29, wherein if the
10 scheduling table has a channel assignment message having a sequence number identical to the sequence number of a received channel assignment message or if the scheduling table has a channel assignment message having a transmission period between a start time and the end of a duration that is overlapped with a
15 transmission period between the start time and the end of the duration of a received channel assignment message, the controller determines that the received channel assignment message was stored in the scheduling table.

33. The channel assigning apparatus of claim 32, wherein if the
duration of the received channel assignment message is not 0, the controller
20 determines that the received channel assignment message requests the stored channel assignment message to be updated.

34. The channel assigning apparatus of claim 27, wherein the
controller conducts data communication on a channel corresponding to the
25 channel identifier of a first read channel assignment message for a period between the start time and the end of the duration set in the read channel assignment message and then on a channel corresponding to the channel identifier of a next read channel assignment message for a period between the start time and the end of the duration set in the next channel assignment message,
30 the start time of the next channel assignment message being set to or after the end

of the data communication according to the first read channel assignment message.

35. The channel assigning apparatus of claim 27, wherein the 5 channel assignment messages are supplemental channel assignment messages.

2025-04-04 10:00:00